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EXAMINER	
RAMOS FELICIANO, ELISEO	
ART UNIT	PAPER NUMBER
2681	7

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/997,091	CLAPPER, EDWARD O.	
	Examiner	Art Unit	
	Eliseo Ramos-Feliciano	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16,21-51 and 58-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,21-51 and 58-62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Abstract

1. Previous objection to the abstract of the disclosure is withdrawn in view of the amendment filed June 1, 2004.

Claim Objections

2. Previous objection to the claims is withdrawn in view of the amendment filed June 1, 2004.

Claim Rejections - 35 USC § 112

3. Previous rejection under 35 U.S.C. 112, second paragraph, is withdrawn in view of the amendment filed June 1, 2004.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-6, 8-16, and 21-36** are rejected under 35 U.S.C. 102(b) as being anticipated by Sumner (US Patent Number 5,182,555).

Regarding **claim 1**, Sumner discloses an apparatus that includes:

a cellular map of cellular communication cells (1332 to 1534) in a geographic area (see Figure 4, column 6, lines 59-68);

a road map of vehicular roads in substantially the same geographic area (see Figure 4, column 13, lines 19-21); and

a traffic flow analyzer (see 103 - Figure 1) coupled to the cellular map and the road map to determine vehicular traffic in at least part of the geographic area (see column 3, lines 46-63, column 6, lines 29-68, and Figure 5).

Regarding **claims 2-6 and 8-9**, Sumner discloses everything claimed as applied above (see *claim 1*). In addition, Sumner teaches that:

at least one part of the geographic area includes at least one cell (for example cell 1432) of the cellular communication cells, as depicted in Figures 4-5; see column 6, lines 49-68.

At least one part of the geographic area is expressed in geographic terms including a reference to at least one of the vehicular roads (for example MAIN STREET), as disclosed at column 14, line 60-68, column 15, lines 23-27, and Figure 5.

Sumner's apparatus provides real-time traffic congestion information; see the abstract, and column 3, lines 8-20. The invention monitors and processes occupancy data from vehicle tracking devices located in particular cells. Based in change over time of cell occupancy and direction of travel, *inter alia*, traffic congestion in a particular cell can be determined. Therefore, means for determining a delta (change) over time in occupancy data for at least one cell of the cellular communication cells is included in Sumner. See column 21-55, and Figure 3.

Sumner's apparatus further includes a communication link (path) for transmitting information concerning the vehicular traffic; see column 5, line 64 to column 6, line 11, and Figure 1 (particularly elements 114 and 115).

The communication link (path) can be a link to cellular devices as claimed; see column 6, line 10.

Sumner's apparatus also includes a processor (131) coupled to the traffic flow analyzer; see Figure 1.

Sumner's apparatus includes a map overlay mechanism (for example see element 132 in Figure 1) for correlating the cellular map and the road map, as shown in Figure 4, and disclosed at column 8, lines 16-19, and column 13, lines 19-21.

Regarding **claim 10**, Sumner discloses a cellular communication device (100) for communicating with a cellular system that includes:

a receiver to receive communications from the cellular system, and a transmitter to transmit communications to the cellular system; see column 5, line 21 to column 6, line 11

map storage to store a map (see column 14, line 45; "database" in Figure 2; 160, 161 and 165 in Figure 5)

an analyzer (111 or 131) coupled to the receiver to receive cell occupancy data corresponding to at least one cellular communication cell and to the storage to access the map to determine traffic in at least one cell according to the occupancy data (Figure 4) (column 14, lines 21-23).

Regarding **claims 11-16**, Sumner discloses everything claimed as applied above (see *claim 10*). In addition, Sumner's device includes means for requesting the cell occupancy data and storage to store the cell occupancy data. See Figure 2, column 5, line 14 to column 6, line 68, and Figure 5.

As depicted in Figures 2-3, the occupancy data can be divided in several sections (namely first and second occupancy data) such as freeway, vehicles, history, etc. The traffic analyzer

determines traffic congestion based on a delta (change) of the occupancy data. The data storage (database) is "updated" in real-time. See abstract, Figure 5, and column 3, lines 46-63.

Sumner's device includes a map overlay mechanism (for example see element 132 in Figure 1) for correlating the cellular map and the road map, as shown in Figure 4, and disclosed at column 8, lines 16-19, and column 13, lines 19-21.

Sumner's device further includes a display as claimed (shown in Figure 4) see column 13, line 20, and column 15, lines 23-27.

The display includes zoom control, as the user may view different section of a geographic area or cells; see column 7, lines 19-68, column 13, lines 44-53.

Sumner's device includes means for updating as claimed; see Figures 2 and 5.

Regarding **claim 21**, Sumner discloses a method that includes determining a delta (change) in occupancy data of at least one cell of a cellular communication system, and determining spatial movement (for example vehicular traffic congestion information) of cellular devices according to the delta (change) in occupancy data; see column 3, lines 46-63, column 5, line 21 to column 6, line 68, column 8, lines 13-28, and Figures 3-5. The explanation for claims 10-16 is also incorporated herein by reference.

Regarding **claims 22-36**, Sumner discloses everything claimed as applied above (see *claim 21*). In addition, the spatial movement of the cellular devices or vehicular traffic is substantially planar. The vehicles can be aircrafts; see column 1, lines 25-45. Therefore, spatial movement can be three-dimensional.

As depicted in Figures 2-3, the occupancy data can be divided in several sections (namely subsets) such as freeway, vehicles, history, etc. The traffic analyzer determines traffic congestion

based on a delta (change) of the occupancy data. The selection can be by experimentation (random) or algorithmic. See abstract, Figure 5, column 3, lines 46-63, and column 10, line 64 to column 13, line 4.

The vehicular traffic congestion information is published or depicted graphically in a display as claimed (shown in Figure 4) see column 13, line 20, and column 15, lines 23-27.

The information is transmitted to cellular devices as claimed; see column 5, line 64 to column 6, line 11, and Figure 1 (particularly elements 114 and 115).
see column 6, line 10.

The information can be considered "travel routing advice".

The information can be limited to those "subscribers" in possession of the ICI system 100. Also can be sent to a non cellular entity, e.g. police, bus, taxi, etc.; see column 5, lines 21-63.

The vehicular traffic can be depicted in for of "vectors". The vectors can be in the form of colors; see column 8, lines 13-28, column 9, lines 65-68.

As exhibited in Figure 4, a linear boundary map describes where vehicular roads connect cells.

In response to the delta (change) in occupancy data and spatial movement, the functionality of the system is adjusted; see Figure 5, and column 6.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Sumner (US Patent Number 5,182,555) in view of Ran (US Patent Number 6,317,686).

Regarding **claim 7**, Sumner discloses everything claimed as applied above (see claim 5). However, Sumner fails to particularly disclose that the vehicular traffic information can be transmitted into the Internet, as defined by applicant.

Ran discloses an apparatus including means for transmitting and providing (elements 4 and 7 - Figure 1) traffic information, including maps, to any of: Internet website, cell phone, pager, PDA, hand-held computer, in-vehicle device, and cable TV; see column 1, lines 18-58, and Figures 1 and 7A-B. The advantage of traffic information via Internet is that many more users can benefit from the provided traffic information.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to enable Sumner's apparatus with means for transmitting the vehicular traffic information into the Internet, so that many more users can benefit from the provided traffic information. Another advantages are that in this way many more users may plan and use alternate travel routes, and that traffic congestion can be alleviated.

8. **Claims 37-51, and 58-62** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumner (US Patent Number 5,182,555).

Regarding **claim 37-38**, Sumner discloses everything claimed as applied above (see *claim 36*). However, Sumner fails to particularly disclose to increase cell capacity based on the delta and spatial movement, nor based on future changes as claimed.

The examiner contends that the delta (change) and spatial movement of devices to a particular cell, inherently burdens the cell capacity to the point of possible overloading. If such tendency can be predicted, overloading can be minimized or at least alleviated. The examiners takes official notice of that a conventional way of alleviating or preventing overloading is increasing cell capacity as claimed.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to increase Sumner's cell capacity based on e delta and spatial movement and/or future changes for the advantage of preventing overloading.

As to **claims 39-51**, they are obvious method claims of *claims 10-16 & 21-38*. Therefore, they are rejected for the same reasons shown above.

Regarding **claims 58-62**, Sumner discloses everything claimed as applied above (see *claims 1 and 10*, respectively). In addition, Sumner discloses that the traffic flow analyzer is coupled to: categorize the vehicular traffic based on occupancy data corresponding to devices present in the cellular communication system ("in a particular area" - column 5, line 38); categorize based on movement between the cellular communication cells (column 5, lines 41-44); aggregate the occupancy data to determine the vehicular traffic (column 5, lines 34-41).

However, Sumner fails to specify that the devices are cellular devices, but suggests so because teaches that the communication system may consist of cellular telephone transponders (column 6, lines 7-11).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to make Sumner's devices cellular devices, for the advantage of universal mobility and communications reliability.

Response to Arguments

9. Applicant's arguments filed on June 1, 2004 have been fully considered but they are not persuasive.

10. Applicant argues that Sumner does not disclose a cellular map of cellular communication cells in a geographic area.

In response, reference is made to column 6, lines 7-11, where Sumner teaches that the disclosed inventive communication system consist of low powered radio transmitters, such as cellular telephone transponders (cellular communication cells), located throughout the system traffic congestion monitoring area (geographic area).

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication from the examiner should be directed to Eliseo Ramos-Feliciano whose telephone number is 703-305-0078. The examiner can normally be reached from 8:00 a.m. to 5:30 p.m. on 5-4/9 1st Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth, can be reached on (703) 308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ELISEO RAMOS-FELICIANO
PATENT EXAMINER

ERF/erf
August 4, 2004.

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